

**Installation and
Reference Guide**

**HP AdvanceStack LAN Rover/10A
Module by Shiva**

HP Customer Support Services

How to get the latest software/agent firmware

You can download a compressed file containing the latest version of the module software for the LanRover/10A by Shiva: j3230a.exe

from the World Wide Web, HP FTP Library Service, CompuServe, and HP BBS. After you download the file, **extract** the file by typing: *filename /x*. For example, j3230a.exe /x.

World Wide Web

http://www.hp.com/go/network_city

Select the "Support" section.

From this web site you can also download information on the HP networking products. If you have a growing network, download the *Designing HP AdvanceStack Workgroup Networks Guide* or call 1-800-752-0900 to receive a copy through the mail.

HP FTP Library Service

1. FTP to Internet IP Address — ftp ftp.hp.com.
2. Log in as anonymous and press at the password prompt.
3. Enter bin to set the transfer type.
4. Enter cd /pub/networking/software.
5. Enter get *filename* to transfer the file to your computer, then quit.

CompuServe

1. Login to CompuServe.
2. Go to the "hp" service.
3. Select "HP Systems, Disks, Tapes, etc."
4. Select "Networking Products" library.
5. Download *filename* then quit.

HP BBS

Set your modem to no parity, eight bits, 1 stop bit, set speed up to 14400 bps, and with your telecommunication program (e.g., Windows Terminal) dial (208) 344-1691 in the U.S. to get the latest software for your HP networking product. For other countries, see <http://www.hp.com/cposupport/eschome.htm> to get local BBS numbers.

(over for more services)



Obtain the latest firmware (j3230a.exe) from

World Wide Web: http://www.hp.com/go/network_city

HP FTP Library: ftp ftp.hp.com

HP BBS: (208) 344-1691

(over)



HP FIRST Fax Retrieval Service

HP FIRST is an automated fax retrieval service that is available 24 hours a day, seven days a week. HP FIRST provides information on the following topics:

- Product information
- Troubleshooting instructions
- Technical reviews and articles
- Configuration information

To access HP FIRST, dial one of the following phone numbers:

Location	Phone Number
U.S. and Canada Only	Dial 1 (800) 333-1917 with your fax machine or touch-tone phone and press 1.
Outside the U.S. and Canada	Dial 1 (208) 344-4809 from your fax machine and press 9. To receive a list of currently available documents, enter document number 19941. The information you requested will be sent to you by return fax. For other countries, see http://www.hp.com/cposupport/eschome.htm to get local fax numbers.

Additional HP Support Services

In addition to the above services, you can purchase various HP telephone support services which provide you expert HP technical assistance:

- Network Phone-In Support provides you support at an hourly rate. In the USA, call 1-800-790-5544. In other countries, please contact your local HP Response Center to see if this service is available in your country.
- HP SupportPack Comprehensive Network Support provides complete problem resolution for medium to large interconnected local and wide area networks. Contact your HP Authorized Reseller or the nearest HP Sales and Support Office for more information.

HP offers other hardware support services. Please contact your reseller for more information.



CompuServe: Go the "hp" service.
Select HP systems, etc.
Select Networking Products.
Download the file.

Network Phone-In Support (hourly): 1-800-790-5544

HP AdvanceStack LanRover/10A Module by Shiva

Installation and Reference Guide

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Applicable Product

HP J3230A AdvanceStack LanRover/10 Module by
Shiva

HP J3200A Switching Hub-12R
HP J3202A Switching Hub-24R
HP J3204A Switching Hub-24T

HP AdvanceStack Switch 208
HP AdvanceStack Switch 224

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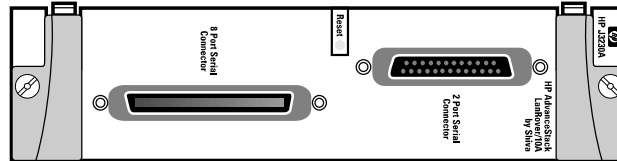
Warranty

A copy of the specific warranty terms applicable to
your Hewlett-Packard products and replacement
parts can be obtained from your HP Sales and
Service Office or authorized dealer.

Contents

Verifying Included Parts	2
Installing a LanRover/10A by Shiva Module into a Slot	3
(Remote 2C Only) Connect Cables From the Remote 2C To the Office LAN	6
Self Test	7
Description of LanRover/10A Module by Shiva LEDs	8
Where to Go From Here	9
Removing A LanRover/10A by Shiva Module	10
Troubleshooting	11
Specifications	12
Regulatory Statements	15

HP AdvanceStack LanRover/10A Module by Shiva Installation and Reference Guide



The HP J3230A AdvanceStack LanRover/10A Module by Shiva is a module that can be inserted into the following products:

- HP AdvanceStack Switching Hub-12R, 24R, and 24T
- HP AdvanceStack Remote 2C
- HP AdvanceStack Switch 208 and 224

The features of the HP J3230A AdvanceStack LanRover/10A Module by Shiva are:

- Ten asynchronous ports (RS-232, RS-423, to 112 Kbps)
- Quick Setup Wizard for only a 15-minute configuration of the LanRover/10A by Shiva
- Single-user, multiprotocol, dial-in remote access for PCs running DOS, Windows, Windows 95, and Windows NT (TCP/IP, IPX, NetBEUI, 802.2/LLC protocols); Macintosh computers (AppleTalk and TCP/IP protocols); and UNIX computers (TCP/IP and SLIP protocols)
- Shared dial-out (modem pooling) for PCs running DOS, Windows, and Windows 95 (TCP/IP and IPX protocols)
- Support for external terminal adapters with analog interface allows the use of an ISDN line as supported by the external terminal adapter
- Support for Microsoft IPCP extensions for automatic name server configuration (DNS address, WINS address) of IP stacks, Microsoft TCP/IP-32 and FTP PC/TCP & OnNet
- Support for dial-in channel aggregation over internal ISDN adapters (IBM WaveRunner and ISDN*tek) using Multilink Protocol and external ISDN terminal adapters
- LAN to LAN routing for IP and IPX protocols
- Connection features, including:
 - Idle detect
 - Persistency

- Backup phone numbers
- Dialback
- Timed connections
- Virtual connections (RIP, Telnet, and SAP)
- Channel aggregation
- Virtual connections for TCP/IP and IPX (Windows only)
- BOOTP
- Security (Authentication method can be combined with an authorization method):
 - User Authentication: Internal User List, Novell, Shiva User List Server, TACACS, TACACS+, and Radius
 - Third Party Authentication: SecurID and Digital Pathways Security Server
- Authorization
 - HP user list; single database can be downloaded simultaneously to multiple HP products
 - HP user list server; single HP product can act as a centralized server for other HP devices, providing many features, including full HP permissions, change password, etc.
 - NetWare Bindery available for all protocols, including ARA.

This guide shows you how to install your remote access module into the HP AdvanceStack products such as the Remote 2C, Switching Hubs, and Switch 208/224.

Verifying Included Parts

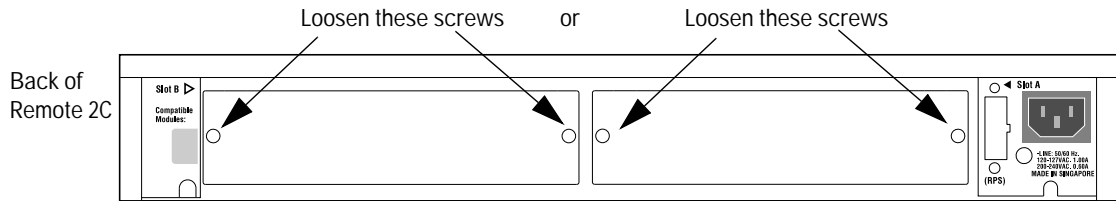
The LanRover/10A by Shiva has the following components shipped with it:

- This manual: *HP AdvanceStack LanRover/10A Module by Shiva Installation and Reference Guide* (J3230-90001)
- Warranty booklet
- An LED overlay slide-in label to be placed on the front of the device in which it is inserted
- Two cables:
 - 8-port Octopus cable for up to eight modems (5064-2020)
 - 2-port Y cable for up to two modems (5064-2021)
- CD-ROM with software manuals
- Floppy disks with a backup copy of the LanRover software

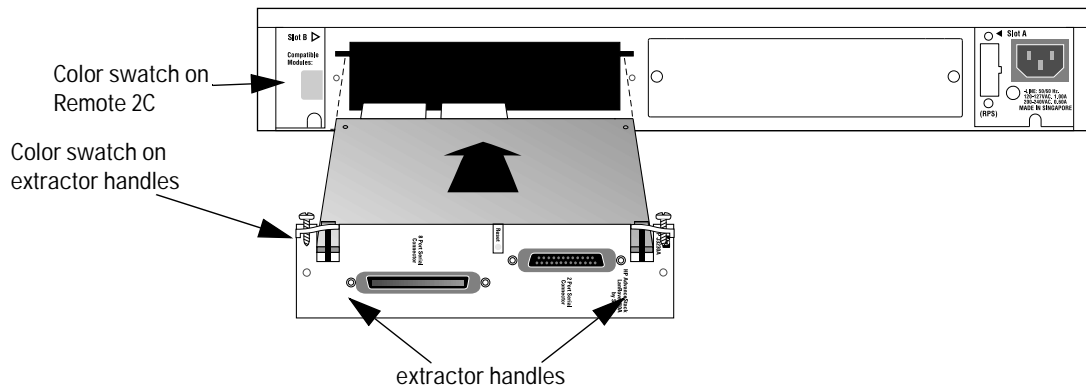
Installing a LanRover/10A by Shiva Module into a Slot

To install the module into the Remote 2C, HP Switching Hub, or HP Switch, follow these steps:

1. If you are installing the module into the Remote 2C, you do not need to remove power. For other products, such as the HP Switching Hub or HP Switch, verify that the power cord has been removed.
2. Remove the cover plate on a slot:

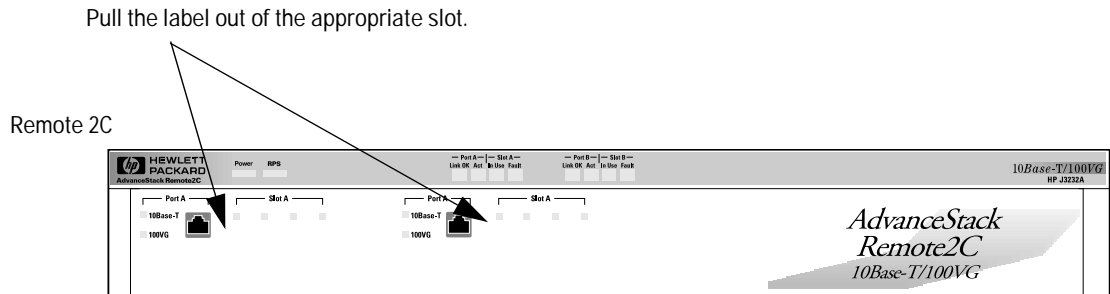


3. Insert the LanRover/10A by Shiva into a slot. Note that the module has matching color handles with the color switch on the back of the unit the module inserts in.

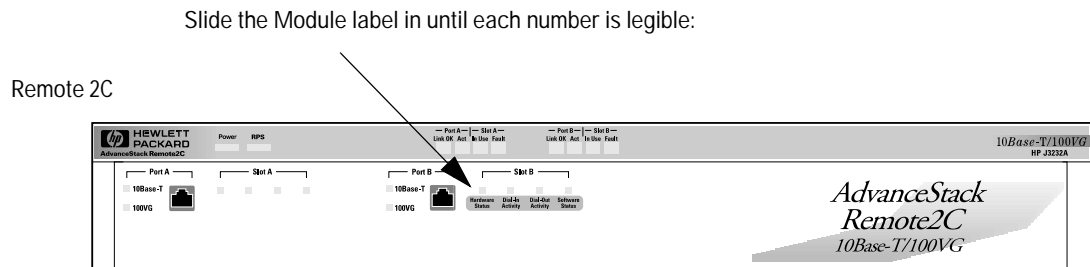


4. Push the extractor handles down.
5. Tighten the two screws that hold the module in place. *Be careful not to overtighten the screws.*

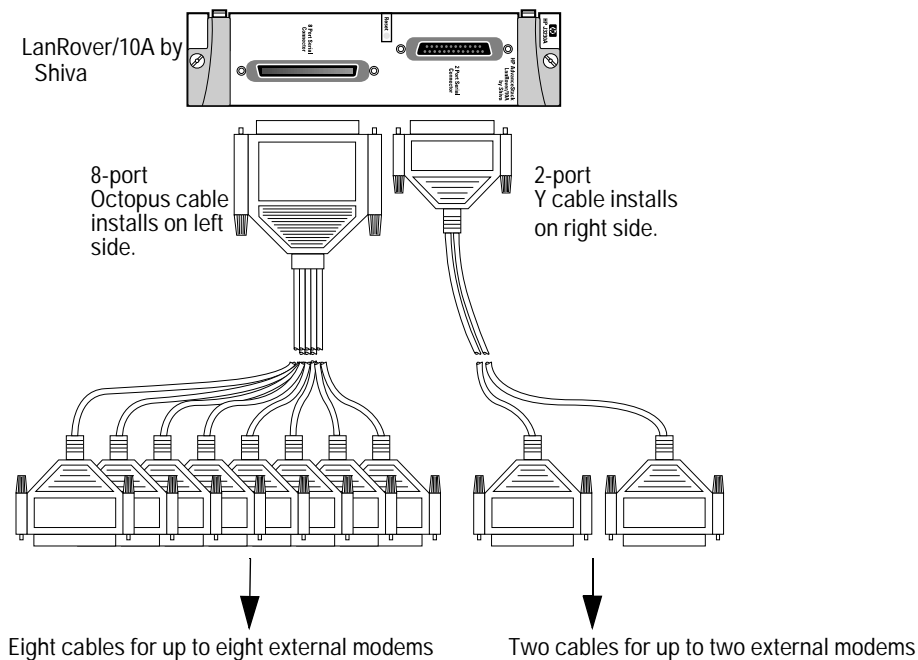
6. On the front of the switch, hub or Remote 2C, remove the blank label from the appropriate slot:



7. Insert the module's slide-in label:



8. Connect the cables. The module allows for up to ten modems to be connected to the LanRover/10A Module by Shiva. The cable that inserts into the right connector supports up to two modems and the cable that inserts into the left connector supports up to eight modems. Determine how many modems you are connecting and then select one or both cables. Both cables do not need to be connected in order for the LanRover/10A by Shiva to operate correctly.

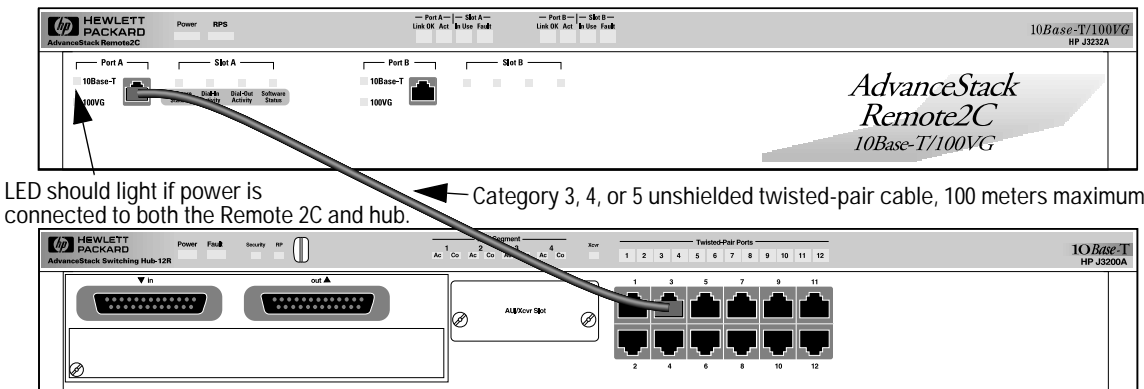


9. After you connect the cable(s) to the LanRover/10A by Shiva, connect the other end of each cable to an external modem. Verify that your external modems have power connected to them.

(Remote 2C Only) Connect Cables From the Remote 2C To the Office LAN

The Remote 2C has two RJ-45 ports on the front of the box for connecting each module to your LAN. Follow the illustrations below to connect the Remote 2C to your LAN:
Example 1: Remote 2C connected to an Ethernet Switching Hub-12R

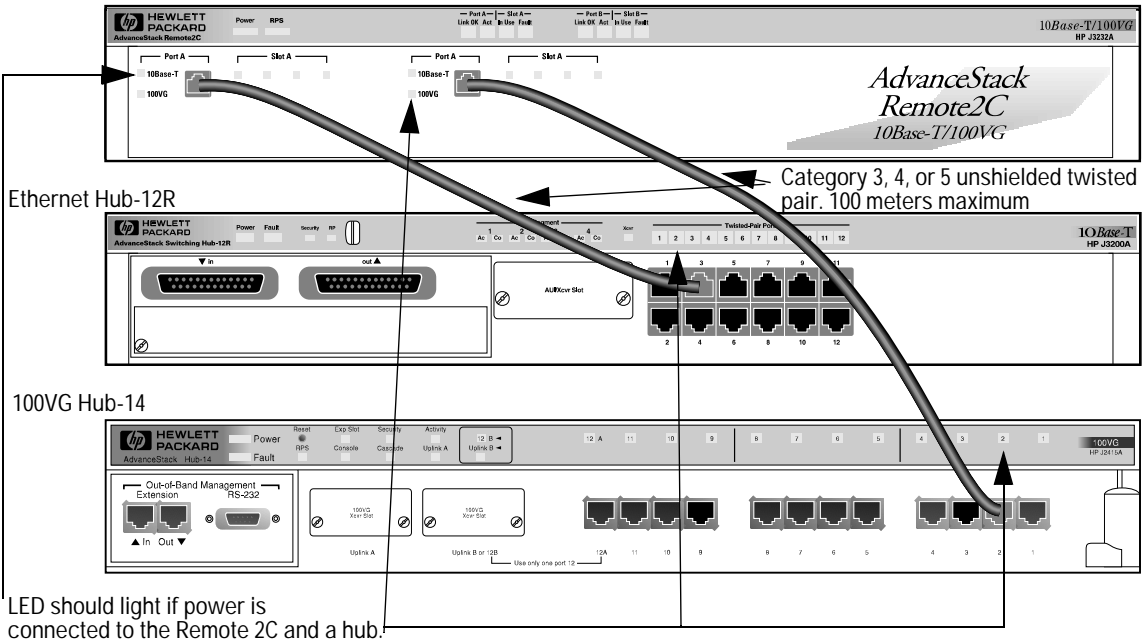
Remote 2C



Ethernet Hub-12R

Example 2: Remote 2C connected to an Ethernet Switching Hub-12R and a 100VG Hub-14

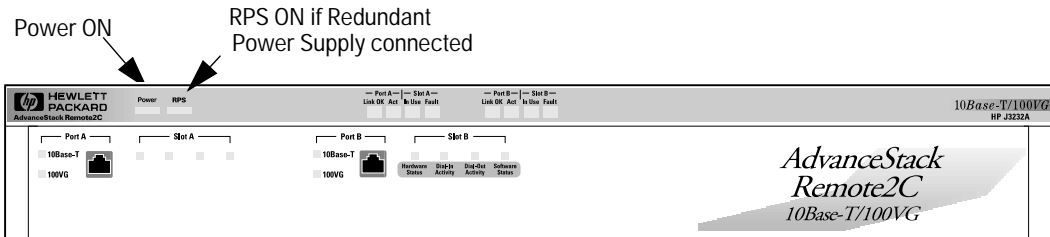
Remote 2C



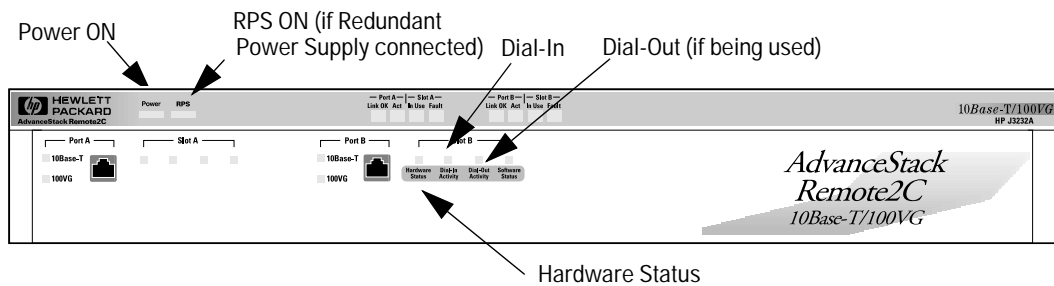
Self Test

10. Plug the power cord into the power cord receptacle and into an AC power source. Plug the power cord into the power cord receptacle for each modem. Self test lasts up to 60 seconds. Check the LEDs:

During self test:



After self-test, the following LEDs are on:



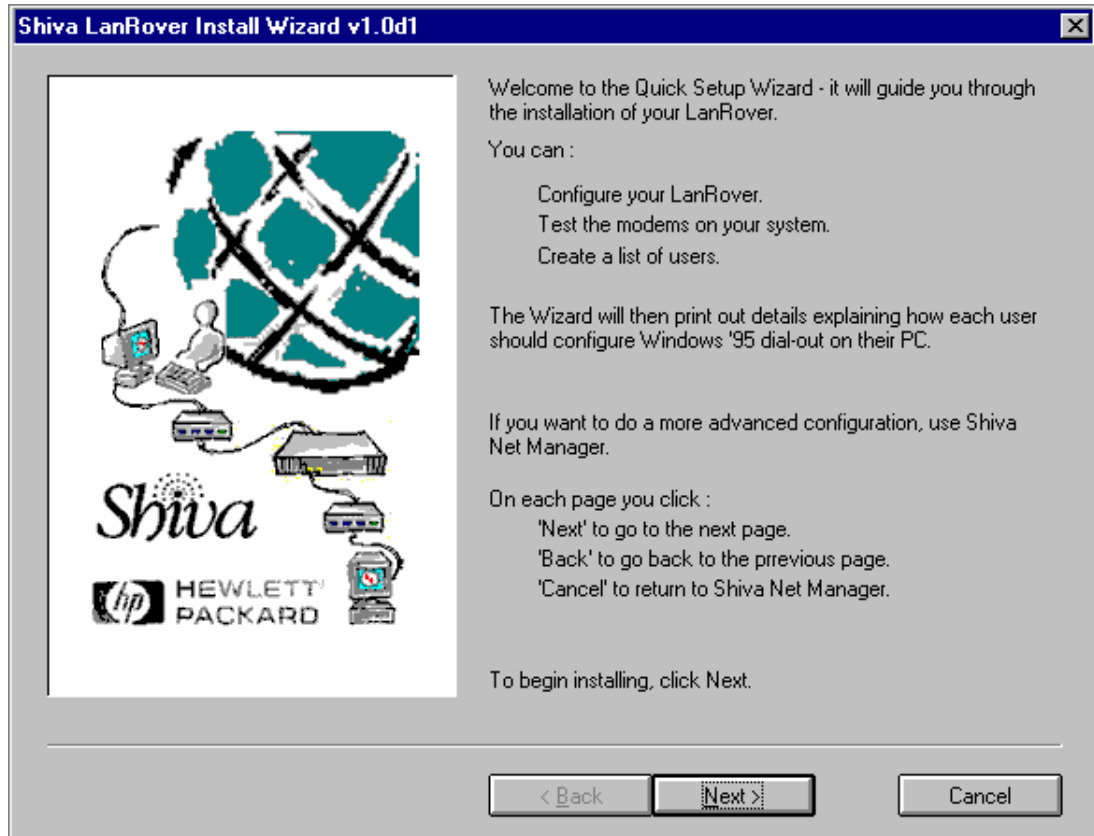
Description of LanRover/10A Module by Shiva LEDs

The LanRover/10A by Shiva has the following LEDs:

LED	State	Meaning
Hardware Status (green)	ON	The module is inserted correctly and is operating normally.
	Flashing	The module failed self test.
	OFF	The module is not installed.
Dial-In WAN Activity (green)	ON	Indicates that at least one user has dialed <i>in</i> successfully.
	Flickering	The amount of flickering indicates the level of traffic transmitted between the device (e.g., hub, switch, or Remote 2C) and the module.
Dial-Out WAN Activity (green)	ON	Indicates that at least one user has dialed <i>out</i> successfully.
	Flashing	Indicates the amount of traffic transmitted between the user(s) and the device the module is inserted into (e.g., hub, switch, or Remote 2C).
Software Status (green)	OFF	(Normal operation) The software on the module has passed its self test.
	Flashing	The software failed. See HP Support Services at the front of this guide to get replacement software.

Where to Go From Here

You are now finished installing the module and connecting cables. You need to configure the LanRover/10A using the included software, Quick Setup Wizard which will take you approximately 15 minutes.



When you run the Quick Setup Wizard, it asks you to connect your modems and connect to an Ethernet or 100VG network. The Wizard automatically determines if you are running an IP or IPX network, it discovers all of your modems connected and their manufacture type. Then the Wizard run tests from modem to modem after you provide phone numbers. The Wizard provides two tests for the modems: a short test and a long test.

The short test will dial-out from one port and back into another. Every port will be tested for both dial-in and dial-out and the results presented. The long test will require you to select two ports to test. The Wizard will then attempt to bring up a connection between the two ports and continually transfer a file between the two until you stop the test. While the test is running the Wizard will display the connection speed, the number of bytes transmitted and received, and the number of CRC errors.

Removing A LanRover/10A by Shiva Module

The module is removed from the hub, switch or Remote 2C by reversing the installation steps described earlier in this guide. To remove the module, follow these steps:

1. Remove power from the Switching Hub or Switch 208/224 by unplugging the power cord. (If you are removing the module from a Remote 2C, you do not need to remove power.)
1. Disconnect the two cables from the module.
2. Unscrew the two captured screws holding the module.
3. Pull the extractor handles up.
4. Pull the module out of the slot.

Warning: Replace the Expansion Slot cover plate over the slot using the two screws that hold it in place. Be careful not to overtighten the screws. When using the hub without the Switch Module, the cover plate must always be installed. This is required not only for safety, but also to ensure proper hub cooling.

Troubleshooting

Use the following table to determine the problem with your LanRover/10A Module by Shiva. Also consult the LED table on page 8.

Problem	Solution
EITHER: - All LEDs are lit for the LanRover/10A Module by Shiva and remain lit. - The Fault LED is on for the module.	Verify that the LanRover/10A by Shiva is fully inserted, extractor handles down, screws tightened. For the Remote 2C, try another slot. If you have the Switch 208, 224, any of the Switching Hubs, move the LanRover/10A into one of those empty slots and try again.
One of the modems doesn't seem to be working.	Verify that all modem connections are secure and the screws for each cable are tightened. Verify that power is on for the modems. Reset the modem.
I have the LanRover/10A installed in a Switching Hub yet I can't access the module.	In the ASCII console or HP AdvanceStack Assistant, verify that the slot is enabled.
When the user tries to dial in, the user does not hear any dialing or seem to make any modem connection at all.	EITHER: -The phone line may be digital instead of analog; install an adapter or change the telephone lines. -The wrong serial COM port is selected; select the correct serial port. -Bad modem or telephone cable; replace the defective cable.
Busy signal, even though the line is not busy	You might have dialed the wrong telephone number or typed in the wrong prefix. Modify the telephone number, including any string prefixes needed to reach an outside line, access codes, and the destination area code (if calling long distance).
The telephone line seems dead.	Perhaps the telephone line is not in service? Attach a standard analog telephone to verify whether you get a dial tone. If that works, try calling the dial-in number to the LanRover/10A Module by Shiva and see if you hear modem sounds.

If you are still having problems with the LanRover/10A by Shiva, see the Customer Support page at the beginning of this manual for information on how to contact HP.

Specifications

Physical

Width	15.24 cm (6.00 in)
Depth	15.24 cm (6.00 in)
Height	4 cm (1.63 in)
Weight of LanRover/10A:	0.44 kg (0.88 lb)
Weight of 2-port and 8-port cables together:	0.92 kg (2.02 lb)

Environmental

	Operating Temperature	Non-Operating Temperature
Temperature	+0°C to +55°C (32°F to 131°F)	-40°C to 70°C (-40°F to 158°F)
Relative humidity (non-condensing)	15% to 95%at 40°C (104°F)	15% to 90% at 65°C (149°F)
Maximum altitude	4.6 km (15,000 ft)	4.6 km (15,000 ft)

Acoustic Noise

Not applicable

Cable Pin-Out Assignments

Note that both the 2-port cable and 8-port cables share the following properties:

- Overall cable length: 1.0 m.
- Cable should be shielded (braid and foil), 28AWG.
- Cable should have full 360° shielding at the connector shells.

2-Port Cable Pin-Out Assignments

DB25-Female End	Signal	Port 1 DB25-Male	Port 2 DB25-Male
2	TXD-A	2	
3	RXD-A	3	
4	RTS-A	4	
6	DSR-A	6	
8	DCD-A	8	
20	DTR-A	20	
22	RI-A	22	
14	TXD-B		2
16	RXD-B		3
19	RTS-B		4
13	CTS-B		5
18	DSR-B		6
12	DCD-B		8
11	DTR-B		20
25	RI-B		22
7	SIGNAL GND	7	7
1	SHELL GND	1	1

8-Port Cable Pin-Out Assignments

At SCSI End	At DB25 End ("Port 3")	At SCSI End	At DB25 End ("Port 4")
	1 (shield)		1 (shield)
2	2 (txd)	10	2 (txd)
3	3 (rxs)	11	3 (rxs)
4	4 (rts)	12	4 (rts)
5	5 (cts)	13	5 (cts)
6	6 (dsr)	14	6 (dsr)
7	8 (dcd)	15	8 (dcd)
8	20 (dtr)	16	20 (dtr)
9	22 (ri)	17	22 (ri)
1	7 (gnd)	1	7 (gnd)

(continued on next page)

8-Port Cable Pin-Out Assignments *(continued)*

At SCSI End	At DB25 End ("Port 5")	At SCSI End	At DB25 End ("Port 6")
	1 (shield)		1 (shield)
18	2 (txd)	26	2 (txd)
19	3 (rxn)	27	3 (rxn)
20	4 (rts)	28	4 (rts)
21	5 (cts)	29	5 (cts)
22	6 (dsr)	30	6 (dsr)
23	8 (dcd)	31	8 (dcd)
24	20 (dtr)	32	20 (dtr)
25	22 (ri)	33	22 (ri)
34	7 (gnd)	34	7 (gnd)

At SCSI End	At DB25 End ("Port 7")	At SCSI End	At DB25 End ("Port 8")
	1 (shield)		1 (shield)
36	2 (txd)	44	2 (txd)
37	3 (rxn)	45	3 (rxn)
38	4 (rts)	46	4 (rts)
39	5 (cts)	47	5 (cts)
40	6 (dsr)	48	6 (dsr)
41	8 (dcd)	49	8 (dcd)
42	20 (dtr)	50	20 (dtr)
43	22 (ri)	51	22 (ri)
35	7 (gnd)	35	7 (gnd)

(continued on next page)

8-Port Cable Pin-Out Assignments (continued)

At SCSI End	At DB25 End ("Port 9")	At SCSI End	At DB25 End ("Port 10")
	1 (shield)		1 (shield)
52	2 (txd)	60	2 (txd)
53	3 (rxd)	61	3 (rxd)
54	4 (rts)	62	4 (rts)
55	5 (cts)	63	5 (cts)
56	6 (dsr)	64	6 (dsr)
57	8 (dcd)	65	8 (dcd)
58	20 (dtr)	66	20 (dtr)
59	22 (ri)	67	22 (ri)
68	7 (gnd)	68	7 (gnd)

Note: Pins 1, 34, 35, and 68 on the SCSI connector connect to ALL pin 7's on the DB25 ends (e.g., "Port 3" and "Port 4" DB25 connectors pins 7 (gnd) connect to SCSI connector pin 1, "Port 5" and "Port 6" pins 7 connect to 34, etc.)

Regulatory Statements

FCC Class A Statement (for U.S.A. Only):

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area may cause harmful interference in which case the user will be required to correct the interference at their own expense.

VCCI Class 1 (For Japan Only)

注意

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European Community

This equipment complies with ISO/IEC Guide 22 and EN55022 Class A.

This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

Canada

This product complies with Class A Canadian EMC requirements.



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